

National Implementations

- Safety Edge Hardware

Georgia DOT



TransTech



Troxler



Advant-Edge



Boggs



NCDOT Prototype



Carlson End Gate



Safety Edge devices that are currently on the market for purchase are from TransTech, Advant Edge, Troxler, and Carlson (items highlighted in Orange). The TransTech, Advant Edge, and Troxler devices fit on the inside corner of the paving machine; the Carlson device places the edge device on the outside of the paving machine (replace standard end gate with end gate shoe). The other devices shown are what DOT's have experimented with or what contractors have built for their use.

Informational Web Links

Edge Devices

- **TransTech**
 - http://www.transtechsys.com/products/pro_products_main.htm
- **Advant-Edge**
 - <http://www.advantedgepaving.com/>
- **Troxler**
 - <http://www.troxlerlabs.com/products/safetslope.php>
- **Carlson**
 - <http://www.carlsonpavingproducts.com/downloads/accessories.pdf>

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Above are informational web links if you are interested in learning more about safety edge devices that are on the market for purchase. Currently these include TransTech, Advant Edge, Troxler, and Carlson.

Johnston County Pilot Project

• Edge Device Lessons Learned - Prototype



Photo 1 represents safety edge devices that do not have a back plate that keeps the edge device from moving horizontally. This horizontal movement could allow edges to be formed at greater than 30 degrees. This horizontal rotation most likely occurs at driveways when the end gate of the screed is extended out to go over the driveway extension in combination with the safety edge device not being raised to full height prior to extending the gate for the driveway cut.

Photo 2 represents how the contractor tack welded two bolts to the back of the screed instead of drilling holes through the screed.

Photo 3 and 4 represents the safety edge device prototype 1 that NCDOT fabricated. Notice how the safety edge device in fully raised position still extends approximately 2 inches below the screed. This is incorrect. Proper installation is when the device is in the full raised position and is installed so that the bottom of the device is even with the bottom of the screed. This allows for the shoe to be raised and the end gate to extend in and out without the device snagging within the process. On this particular set of photos, the device has a 10 inch spring. The device should either be mounted higher on the machine or an 8 inch spring should be used to get the bottom of the shoe flush with the bottom of the screed. The first prototype also had 2 inch side guides added to the backplate.

Photo 5 demonstrates how the 90 degree bottom of the safety edge device pulled dirt into the edge shape.

Johnston County Pilot Project

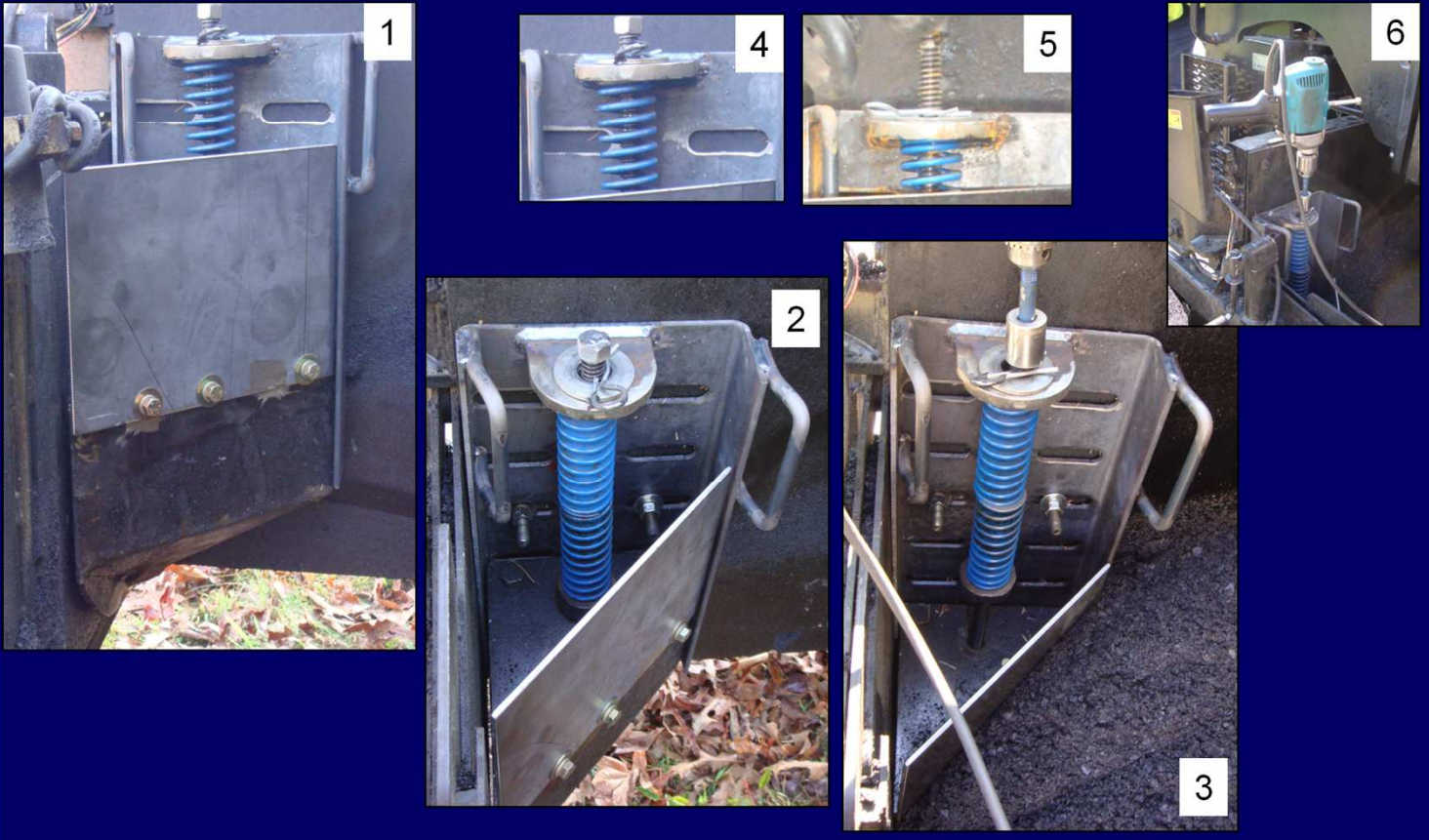
- Edge Device Lessons Learned - Prototype



These photos demonstrate the amount of asphalt that gets packed around the spring and screw device during the paving process.

Johnston County Pilot Project

• Edge Device Lessons Learned - Prototype



To alleviate some of the problems we experienced at the first three installations in the Pilot Projects (shown in the last two slides), we made additional changes to our Prototype 1. The above are photos of Prototype 2.

Photo 1 represents how the safety edge should look when mounted properly. Notice the device is in the fully raised position, and when mounted, the bottom of the safety edge device is flush with the bottom of the screed. The 90 degree edge was cut off at the bottom of the device and given a radius as to not pull dirt into the safety edge shape. Also, a plate was added to the front of the edge device to keep the asphalt out of the spring and screw device.

Photo 2 demonstrates the safety edge device raised to its highest position.

Photo 3 demonstrates the safety edge device lowered to its lowest position. There is approximately 5.5 inches of travel with this system. Notice in the lowered position that no asphalt is making contact with the spring and screw device due to the placement of the steel plate.

Photo 4 demonstrates where the cotter pin of the device is placed when the 10 inch spring is in place. Cotter pin in upper hole on screw.

Photo 5 demonstrates where the cotter pin of the device is placed when the 8 inch spring is in place. Cotter pin in lower hole on screw.

Photo 6 demonstrates how the contractor used an electric drill to raise and lower the devices at driveways in

a matter of 5 to 10 seconds.